

EXPANDING SEALING STRIPS FOR STEAM TURBINES

ABSTRACT OF THE DISCLOSURE

A turbine includes, in an exemplary embodiment, an outer housing, a turbine shaft rotatably supported in the outer housing, and a plurality of turbine stages located along the turbine shaft. Each turbine stage includes a diaphragm attached to the casing, a rotor having a plurality of buckets and a bucket cover fixedly attached to the turbine shaft, and a packing ring mounted in a first circumferentially extending groove in said diaphragm. The packing ring includes a seal shroud and a sealing means and is positioned adjacent the turbine shaft. The seal shroud is fabricated from a first material having a first coefficient of expansion, and the diaphragm is fabricated from a second material having a second coefficient of expansion. The first and second materials are selected so that at a first temperature a gap between the turbine shaft and the diaphragm is larger than at a second higher temperature.